

REMARKS

Claims 1, 8, 15, and 19-21 have been amended. Claims 1-21 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 112, First Paragraph Rejection:

The Office Action rejected claims 1-21 under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. Specifically, the Office Action calls attention to claim 1, observing that it now contains the language “a stateless client that, during operation, communicates with said server” instead of the original language “a stateless client configured to communicate with said server.” Office Action at 2, 16. Applicants respectfully traverse this rejection for at least the following reasons.

A. The Office has failed to meet its burden of demonstrating that the claims fail to comply with the written description requirement.

To sustain a rejection on the grounds of failure to meet the written description requirement, an examiner must do more than merely note that the language of the claims does not identically appear in the specification:

The examiner . . . bears the initial burden . . . of presenting a prima facie case of unpatentability. Insofar as the written description requirement is concerned, that burden is discharged by presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims. Thus, the burden placed on the examiner varies, depending upon what the applicant claims. If the applicant claims embodiments of the invention that are completely outside the scope of the specification, then the examiner or Board need only establish this fact to make out a prima facie case. If, on the other hand, the specification contains a description of the claimed invention, albeit not in *ipsis verbis* (in the identical words), then the examiner or Board, in order to meet the burden of proof, must provide reasons why

one of ordinary skill in the art would not consider the description sufficient.

In re Alton, 76 F.3d 1168, 1175 (Fed. Cir. 1996) (internal quotation marks and citations omitted; emphasis added).

Here, the Office Action merely observes that the language a particular feature of claim 1 differs from what appears in the specification, and concludes that for this reason alone (i.e., without providing any evidence or reasons why one of ordinary skill would not consider the description sufficient) claim 1 fails to meet the written description requirement. The Office Action then concludes that the other independent claims also fail to meet this requirement, again without providing any specific reasons. Such a conclusory rejection clearly fails to meet the Federal Circuit's requirement for establishing a *prima facie* case of unpatentability as set forth above.

B. One of ordinary skill would recognize from the original specification that Applicants had possession of the claimed invention.

Notwithstanding the failure of the Office to establish a *prima facie* case that the claims fail meet the written description requirement, the pending claims do in fact meet this requirement.

It is very well settled law that the claimed invention does not have to be described in *ipsis verbis* in order to satisfy the description requirement of §112. “[I]psis verbis disclosure is not necessary to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question.” *Fujikawa v. Wattanasin*, 93 F.3d 1559, 1570 (Fed. Cir. 1996). “Terms need not be used in *haec verba*.” *Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1154 (Fed. Cir. 2004) (internal citation omitted; emphasis added).

In this instance, one of ordinary skill in the art would clearly recognize that when the specification describes what an entity is “configured to” do, it necessarily describes what that entity actually does when it is operating, on at least some occasions. According to the *Merriam-Webster Online Dictionary*, the ordinary meaning of “configure” is “to set up for operation especially in a particular way.” (emphasis added). That is, to describe how something is configured is to describe its structure in terms of what it is capable of doing.

It is difficult to imagine that one of ordinary skill in the art would understand that (a) a disclosure describes that an entity is capable of doing something, and yet conclude from the same disclosure that (b) the entity never actually does anything. But this is precisely what the Office would have to establish in order to support its contention that one of ordinary skill would not understand a disclosure that X is “configured to” do Y to also entail that X, during operation, does Y.

Thus, Applicants submit that to the extent that the specification describes that an entity is “configured to” do Y, one of ordinary skill would understand from the specification that Applicants also had possession of an entity that, during operation, does Y. Therefore, Applicants submit that the written description requirement would be satisfied as to the claim language even absent further inquiry into the specification.

However, further inquiry yields even more unambiguous written description support for the claim language. Applicants note that according to paragraph [0048] of the specification, “FIG. 5 illustrates the operation of one embodiment of a stateless-client/server system configured to support user access to storage devices locally attached to a given stateless client.” (emphasis added). Thus, Applicants submit that the specification describes not only what various entities are configured to do, but also explicitly describes their actual operation according to various embodiments.

More specifically considering claim 1, paragraph [0049] states that “an application 400 may execute on given server 20.” From this non-limiting example,

Applicants submit that one of ordinary skill would understand the specification to disclose “a server that, during operation, executes an application,” as recited in claim 1.

Additionally, paragraph [0050] states that “[t]he user may then interact with application 400 via given stateless client 10 (block 504). For example, the user may enter text and control menus of application 400 via keyboard 151 and mouse 153. Control information generated by those peripherals may be conveyed to given server 20 over network 15, and server 20 may send graphical information back to given stateless client 10 via network 15 for display on video display device 125.” For this to be the case, stateless client 10 necessarily communicates with given server 20. Accordingly, from this non-limiting example, Applicants submit that one of ordinary skill would understand the specification to disclose “a stateless client that, during operation, communicates with said server such that during use a user interacts with the application that executes on the server by interacting with the stateless client,” as recited in claim 1.

Paragraph [0051] states that “the user may subsequently couple a storage device 25 to given stateless client 10,” and paragraph [0052] states that “[o]nce a device interface is made available, the user may access storage device 25 via given server 20 (block 516). For example, the user may instruct application 400 to save a copy of a document in a file on the portable hard disk attached as storage device 25.” Accordingly, from this non-limiting example, Applicants submit that one of ordinary skill would understand the specification to disclose “a mass storage device locally coupled to said stateless client, wherein during operation, said mass storage device is accessed by said user via said server,” and “wherein during operation, said server stores data to said mass storage device via said stateless client in response to said user’s interaction with said application,” as recited in claim 1.

Regarding claim 8, Applicants submit that at least the above portions of the specification also support the recitations “a user interacting with an application that executes on a server, wherein the user interacts with the application via a stateless client that communicates with said server” and “said mass storage device storing data, said data

being received from said server via said stateless client in response to said user interacting with said application.”

Regarding claim 15, Applicants note that paragraph [0073] states that “[o]n exemplary embodiment of a server computer system is illustrated in FIG. 8. In the illustrated embodiment, server system 800 includes a processor 810 coupled to a system memory 830 via interface logic 820.” Additionally, paragraph [0078] of the specification states that “[i]n some embodiments, system memory 830 may be one embodiment of a computer-accessible medium configured to store program instructions executable by processor 810 as well as data accessible by processor 810. The program instructions and data may comprise any software program, module or application, such as any of the software modules illustrated in FIG. 4 or FIG. 6, for example. Such program instructions and data are illustrated as code 835 within system memory 830 in the illustrated embodiment.” Accordingly, from this non-limiting example, Applicants submit that one of ordinary skill would understand the specification to disclose “a computer-accessible storage medium that stores program instructions, wherein the program instructions, when executed by a server,” perform the various operations that are recited in claim 15. Moreover, Applicants submit that these various operations are supported for at least the reasons given above with respect to claims 1 and 8.

For at least the foregoing reasons, Applicants submit that the rejection of claims 1-21 under 35 U.S.C. § 112, first paragraph as allegedly failing to satisfy the written description requirement is unsupported, and respectfully request that it be withdrawn.

Section 102(b) Rejections:

The Office Action rejected claims 1, 3, 8 and 10 under 35 U.S.C. § 102(b) as allegedly being anticipated by Peterson (U.S. Publication 2003/0014476) (hereinafter Peterson) in view of King, et al. (U.S. Publication 2005/0102377) (hereinafter King). Additionally, the Office Action rejected claims 1-3, 8-10, and 15-17 under 35 U.S.C. § 102(c) as allegedly being anticipated by Billington et al. (U.S. Patent 7,103,760)

(hereinafter Billington). Although Applicants respectfully traverse these rejections, in order to expedite issuance of a patent, Applicants have amended the independent claims for further clarity. Applicants submit that the cited references fail to anticipate the amended claims for at least the following reasons.

A. Functional limitations are not mere statements of intended use.

Preliminarily, Applicants note that in its Decision on Applicants' Request for Rehearing (hereinafter Decision), the Board of Patent Appeals and Interferences characterized the "configured to" language in Applicants' claims as providing only statements of intended use, and concluded from this that such features "are met by an anticipating prior art structure that is capable of performing those intended uses." Decision at 3. Applicants note that the Board cited no authority for its conclusion that "configured to" language merely states intended use; the Board cited authority only for the proposition that recitations of intended use are met by a structure that is capable of performing such uses (with the implicit conclusion that such a structure anticipates even if it does not actually disclose the intended uses).

Applicants respectfully disagree with the Board's position that "configured to" language in a claim indicates only intended use. Nevertheless, Applicants have previously amended the independent claims such that they recite what various elements actually do during operation. Applicants note that such recitations are not merely statements of how recited structure is intended to be used. Rather, at least some such recitations are affirmative limitations of recited structure in functional terms. That is, they do not merely describe a particular context or application for use, but instead define the properties of the recited structure. In other words, at least some such recitations are functional limitations.

Applicants note that functional limitations of recited structure are perfectly acceptable in a claim. "A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific

ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper.” M.P.E.P. 2173.05(g) (citing *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971))

B. The pending claims are not anticipated by Peterson.

Applicants submit that Peterson fails to disclose or suggest all of the features of amended claim 1. As amended, independent claim 1 recites “a stateless client that lacks an operating system” and “wherein the stateless client does not locally execute applications that access the mass storage device” that is coupled to the stateless client. Support for this amendment may be found, for example, at paragraph [0020] of the specification.

By contrast, Peterson is specifically directed to a “thin client computer operating system.” Peterson, Title (emphasis added). That is, Peterson specifically discusses a “very thin operating system for a thin client computer” that is “DOS shell-based operating system.” Peterson, Abstract and [0020]. Thus, Peterson does not disclose a stateless client or thin client that lacks an operating system as recited by amended claim 1; indeed, the entirety of Peterson’s disclosure is directed to aspects of the operating system that Peterson’s thin clients employ.

Moreover, in Peterson, software applications are loaded or “published” from the server to the thin client, and Peterson specifically provides that “[s]uch multimedia applications as Microsoft Power Point Microsoft Front Page®, Microsoft PhotoDraw®, Adobe PhotoShop® and Davidson Mathblaster® . . . can be executed on the thin client computer of the present invention.” Peterson at [0024], [0020] (emphasis added). To be executed on Peterson’s thin client, once published from the server, these applications must be locally stored on some type of mass storage device, which would be accessed by the thin client during the course of executing the application. Thus, Peterson’s thin

clients are not stateless clients that do not locally execute applications that access the mass storage device, as recited by amended claim 1.

Independent claim 8 has been amended to recite features similar those discussed above with respect to amended claim 1. Accordingly, Applicants submit that the arguments given above for amended claim 1 also apply to amended claim 8.

Independent claim 15 has been amended to recite a computer-accessible storage medium that stores program instructions that, when executed by a server, “interface said mass storage device to an application that executes on said server, wherein the server implements a multithreaded execution environment, and wherein to interface the mass storage device to the application, the program instructions, when executed by the server, implement a device interface through which the mass storage device is visible to the application, and wherein the device interface is implemented by a corresponding device thread that is separately schedulable from other device threads for execution by the server.” Support for these features may be found throughout the specification, for example at paragraphs [0059] and [0060]. Applicants note that Peterson fails to disclose or suggest any aspect of multithreading or the use of multiple device threads in a multithreaded execution environment.

Thus, for at least the reasons given above, Peterson fails to anticipate any of amended independent claims 1, 8, or 15, or their dependent claims.

C. The pending claims are not anticipated by *Billington*.

Applicants submit that Billington fails to disclose or suggest all of the features of amended claims 1 or 8. First, Applicants note that although Billington mentions a “thin client,” Billington fails to disclose “a stateless client that lacks an operating system,” “wherein the stateless client does not locally execute applications that access the mass storage device” as recited by amended claim 1. Applicants note that Billington does not specifically describe the characteristics of a “thin client.” Moreover, Applicants note that

it is not inherent to the definition of “thin client” that a thin client lacks an operating system, because as discussed above, Peterson discloses a thin client that does include an operating system. Thus, Billington does not explicitly or inherently disclose a stateless client having the particular characteristics recited in amended claim 1. Billington also fails to disclose any aspect of multithreading or the use of multiple device threads in a multithreaded execution environment as recited in amended claim 15.

Moreover, Applicants note that the Office Action quotes extensively from Billington to demonstrate that Billington discloses a thin client and a mass storage device, as well as transfer of video data to the mass storage device. Office Action at 18. However, Applicants note that the pending claims do not merely recite “a stateless client,” “a mass storage device,” and data transfer. Rather, claim 1 recites structural components that perform data transfer in a particular way: that is, during operation, an application executes on the server, a user interacts with this application by interacting with the stateless client, and in response to user interaction with the application, the server stores data to the mass storage device via the stateless client.

Billington discloses only that data is somehow stored to a mass storage device coupled to a thin client. But how does Billington accomplish this? The reference simply does not say. By contrast, Applicants note that claims 1 and 15 require that during operation or execution, the recited structural features or instructions actually perform the described operations to accomplish data transfer according to a particular causal sequence of events. Moreover, method claim 8 requires actual performance of recited operations. Mere storing of data, as in Billington, is insufficient to anticipate the storing of data in a particular way by the specific components recited in the claims.

Further, speculation as to whether Billington could somehow be modified or arranged to perform the actions of the claims is irrelevant to the question of anticipation, because Billington does not actually disclose these features. By contrast, “the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose

those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008).

For at least the foregoing reasons, Applicants submit that Billington fails to anticipate any of amended independent claims 1, 8, or 15, or their dependent claims.

Section 103(a) Rejections:

The Office Action rejected claims 4, 5, 11, 12, 15, 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Peterson in view of Bouvier, et al. (U.S. Publication 2003/0014587) (hereinafter Bouvier), claims 6 and 13 as being unpatentable over Peterson in view of Pooni, et al. (U.S. Publication 2004/0064461) (hereinafter Pooni), claims 7 and 14 as being unpatentable over Peterson in view of Hochmuth, et al. (U.S. Publication 2003/0056063) (hereinafter Hochmuth), claims 6, 13 and 20 as being unpatentable over Billington in view of Pooni, and claims 7, 14 and 21 as being unpatentable over Billington in view of Hochmuth. Applicants respectfully traverse these rejections for at least the reasons given above with respect to the independent claims, and note that the additional references do not appear to remedy the omissions of Peterson and Billington discussed above with respect to the independent claims.

Applicants additionally note that various dependent claims have been amended to recite additional features not found in the cited references. For example, claim 20 has been amended to recite “a kernel interface that executes in kernel execution mode and provides to applications that execute on the server a public interface to the mass storage device coupled to the stateless client” and “a daemon interface that executes in kernel execution mode and conveys device access requests from the kernel interface to the storage service daemon, wherein the interface between daemon interface and the storage service daemon is private with respect to applications that execute on the server.” Support for these features may be found throughout the specification, for example at paragraphs [0054]-[0058].

Claim 21 has been amended to recite that the storage service daemon comprises “a plurality of device threads, each corresponding to a respective device interface, and each device thread being separately schedulable from other device threads for execution by the server,” “a remote disk driver that, upon receiving an access request from a particular device thread, assembles a command for the mass storage device according to a command set implemented by the mass storage device,” and “a protocol driver that assembles one or more commands received from the remote disk driver into a transaction for the mass storage device according to a peripheral interface with which the mass storage device is coupled to the stateless client.” Support for these features may be found throughout the specification, for example at paragraphs [0060]-[0062].

Applicants submit that the cited references fail to disclose or suggest all of the features of amended claims 20-21, and thus would fail to support a rejection of those claims. Applicants note that the rejections of various other ones of the claims are unsupported for additional reasons. However, as the rejections of the amended independent claims have been shown to be unsupported, further discussion of the dependent claims is unnecessary at this time.

CONCLUSION

Applicants submit the application is in condition for allowance, and an early notice to that effect is requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-76100/RCK.

Respectfully submitted,

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Date: September 27, 2010